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## BOOK REVIEWS

*Lehrbuch der experimentellen Psychologie.* By J. FRÖBES, S.J. Herdersche Verlagshandlung, Freiburg. Bd. I, 1917, 605 pp.; Bd. II, 1920, 704 pp.

The first impression that one gets from this book is an impression of exceptional bulk; a royal octavo of 1,300 pages closely printed in large and small type, and with relatively few figures! The second impression is that of a wealth of citations from other works: the *Autorenverzeichnis* contains over 1,300 names (300 more than the fifth edition of Wundt's *Grundzüge*); and the author assures us, in the preface, that with very few exceptions he has quoted no book or monograph which he has not read through and judged for himself. Moreover, some of the writers are cited not once only, but many times; Wundt and G. E. Müller over a hundred, Fechner forty-six times; between these extremes come in descending order of frequency Lehmann, Meumann, Ebbinghaus, Titchener, Ribot, Stern and James, and Helmholtz. Our author has evidently not only read diligently, but has also chosen wisely. It was his aim, as he tells us again in the preface, to write a text-book of Psychology of the order of Tigerstedt's *Lehrbuch der Psychologie* or of Ebbinghaus' *Psychologie*. Furthermore, the book is designed to serve as an introduction not only to experimental psychology, as the title might lead us to suppose, but also to the other branches of psychology. Finally, the writer says that he has not found it necessary to give in the present book an exposition of his psychological faith. This he hopes to do in another place at some future time; in the meanwhile, the reader who is curious to know more on the point may find views similar to his own in Geyser's *Lehrbuch der allgemeinen Psychologie*.

The first volume of Fröbes' book is devoted to what he regards as the elementary psychological processes. It comprises a short introduction; two long sections, the one on sensation and feeling, the other on perception; and two shorter sections on psychophysics and on the association of ideas. The second volume is concerned with the 'higher mental activities.' It begins with a transitional section on cortical localization and derangement of associations. Then follow four long sections on *intellectual processes* (attention, the self, memory and learning, intelligence, creative imagination, and language); on *emotion* (emotion in general, classification of emotions, the aesthetic feelings, and expressive movements); on *will* (movement and reaction, the will-consciousness, custom and religion, and personality and mental development); and finally on *anomalies of consciousness* (sleep and dreams, hypnotism and suggestion, and mental pathology in general). Under some of these chapter-headings are materials of differential psychology, social psychology, educational psychology, juristic psychology and the psychology of aesthetics. An enormous programme! What does the author make of it?

He defines experimental psychology as the "science of mental processes, their laws, and their connection, as based upon observation and experiment." By the term 'mental processes' he means psychical

phenomena or phenomena of consciousness, the objects of inner experience. He dismisses definitions by point of view (of which he refers to Wundt's as an instance) solely by the assertion that physics and psychology have no objects in common. The problem of psychology is the description and explanation of the phenomena of consciousness; explanation, of sensation at least, is to be found in physical objects and their effect upon the nervous system. All this is said in the most summary fashion. Fröbes devotes, however, nine pages to method. He recognizes as methods of psychology introspection and observation of behavior (*Fremdbeobachtung*). His treatment of the former is mainly an abstract of the views of G. E. Müller; concerning the latter he follows in the main W. Stern. His notion of sensation is reminiscent of James, Höfler and Geyser: sensations are the elements of the more objective processes, the *Erkenntnisvorgänge*; they are items of knowledge of attributes which belong not to the knowing subject but to the sensory describable object; they combine to form perceptions; and they are also the elements which, at still higher stages, give rise to conceptions and judgments. Every sensation has four attributes, quality, intensity, temporal duration and spatial extension; the two latter, however, do not in Fröbes' thinking belong to sensation in the narrow sense; they are rather 'formal elements,' which assist in the formation of perceptions. Simple feelings, on the other hand, he regards as the elements of the 'more subjective processes' like Emotion and Will. They are dependent upon sensations, but are differentiated from them principally by virtue of their subjectivity. Fröbes also recognizes simple and complex ideas (*Vorstellungen*); the former he considers as 'renewals' (*Erneuerungen*) of earlier simple sensations; the latter are complexes of simple ideas, as perceptions are complexes of simple sensations. Although he discusses differences in intensity, in activity, in direction of attention (Fechner), and Müller's 'indistinctness' of normal images, as marks of differentiation between sensation and simple idea, he concludes that no one of them is essential. In all these systematic questions, however, one feels that the author is not seriously interested; the definitions seem to be merely introductory, purely formal, and are given as if they were to be expected and must be got out of the way. Moreover, the simpler processes are not inherently necessary to the higher. Attention is, for example, placed among the higher intellectual processes, of which sensations are by definition the elements; yet attention suddenly appears full-blown as clearness of higher processes; it is characterised as the opposite of distraction, of wool-gathering, and as subjective (not the objective clearness or distinctness of objects); after this characterisation the literature of attention is discussed under the familiar rubrics; and that is the end of attention. Again, when we come to emotion, the higher feelings are differentiated from the lower by difference in temporal course, in ease of inhibition, in dependence upon mental conditions, etc.; but the question how the simple combine into the higher feelings is never even raised. This lack of interest in writing a psychology that is systematic in any sense other than that of mere classification along conventional lines occasionally leads our author to unfortunate results. Among these is a failure at times to understand clearly the systematic views of other writers. For example, in his discussion of the attributes of sensation he says: "Titchener replaces the attribute of extent (*Räumlichkeit*) by that of clearness, which is determined by the strength of attention" (I, 28). Another result

is a confusion in classification. For instance, the section on thought (in which the Würzburg and the Cornell studies, Wundt's reaction against the thought-experiments, Koffka's book, etc., are reported) divides the chapter on perception into two parts; it occurs after the detailed accounts of the perceptions of space, time and movement, and before those of synaesthesia and the perception of form. The author gives no reason for this grouping; and whatever we may guess leads to the conclusion that the problem of perception has never been fully realized. What, then, it may be asked, is the author's positive contribution to our science?

The book is a collection of facts on and about psychology, drawn from a large number of different sources; the results of experiments conceived from various points of view, selected according to the compiler's judgment, classified under the usual chapter-headings, and moulded into readable form. The attempt is unique in psychology; the nearest approach, Myers' *Text-book of Experimental Psychology*, is still very different. The positive value of the book depends, therefore, upon the relative value of the facts selected, the completeness with which the ground is covered, the accuracy with which the facts are reported, the skill with which they are presented, and the aids supplied for the reader's convenience. From these points of view let us examine the book once more.

The section on sensation is, aside from that on association of ideas, the most complete of the entire work. The facts of visual sensation are taken principally from Hering and his pupils, v. Kries, Titchener, Ebbinghaus, and G. E. Müller. Helmholtz and König are, however, not ignored. The chief innovation is the extended incorporation of Müller's views, drawn not only from the well-known *Zeitschrift* articles but also from Fröbes' manuscript notes of Müller's lectures taken in 1903. The chapter on auditory sensation is based upon Stumpf, Helmholtz, and Schäfer's article in Nagel's *Handbuch*. Two pages are given to Révész' *Qualität*; and in the paragraph on *Klangfarbe* there is a report of the vowel-controversy, which includes the work of Köhler and of Jaensch; the solution of both these problems is, however, left to the future. The principal omission is that of tonal volume, which is mentioned only as a 'quantitative element' of *Klangfarbe*. On the side of theory we have only a brief account of Helmholtz', and a still shorter reference to that of Ewald; for others the reader is referred to Schäfer. Taste and smell, cutaneous, kin-aesthetic and static, and organic sensations are likewise reported from the standard sources, and on the whole are faithfully reported and clearly presented. Apparently, neither Henning's work on taste and smell nor Boring's on sensations of the alimentary canal was available; but, at any rate, are missing. The account of simple feeling is mainly a summary report first of the controversies about feeling (which suffers for want of insight into the reasons for the differences of opinion), and secondly of the results of experiments by the method of expression, particularly those of Lehmann and the Wundtians. All of the experimental work based upon the method of impression is ignored. The experimental work on 'simple ideas' is also insufficiently reported. In the long section on perception, the principal facts are taken from the important secondary sources like Hermann's and Nagel's *Handbücher*, the treatises of Wundt, Ebbinghaus, Stumpf, Witasek, etc. There are also many reports of original experiments and occasional abstracts of long books. One wonders at times at the relative amount of space assigned to various topics;

why, for instance, six pages should be given to a digest of Katz' *Erscheinungsweisen der Farben*, significant as that book is, and only about the same amount to the geometrical-optical illusions. Or again, one may miss a fact like Wertheimer's Phi-phenomenon which seems important enough for mention. On the whole, however, the section is well done. The point of view of the *Psychophysik* is that of Müller; and the treatment of methods, and discussions of the significance of the limen, of Weber's law, etc., are drawn principally from Fechner, Müller, Titchener, and Lehmann. The article is, however, brought up to date; the views of Wirth and Urban are presented; and the section closes with a long chapter on correlation. The best parts of the final section of the first volume, on association of ideas, are, as one might expect from a pupil of Müller's, those which deal with the methods and results of the association-experiments. The worst part is the chapter on ideational types, which is inadequate as regards the available facts. The association-reaction, including Jung's *Tatbestandsdiagnostik*, is described in this section.

This brief analysis of the first volume must suffice for the present review, although the second volume is a different book, and might well have had a different title; it is a 'general' psychology. And because under many chapter-headings there is no large body of accepted fact upon which to draw, there is greater opportunity for disagreement as regards the choice of the facts which go into these chapters. The author has, however, in most cases chosen his authorities wisely: Meumann and Müller for memory and learning, Wundt for language, Ach for will, Fechner, Groos, Witasek and Külpe for aesthetics, Stern for differential psychology, Preyer and Stern for child psychology, Kraepelin, Störing and Janet for abnormal psychology. If no one of the chapters based on such authorities would fully satisfy the expert, they will at least give the reader an orientation, not in the points of view of the various psychologists, but in the principal facts. And this, we suppose, is the author's aim. It must, however, be added that arrangement and emphasis often leave much to be desired: let the reader try, for instance, to determine from Fröbes' references the various usages and the preferred signification of the important term 'empathy'!

Taking the book as a whole, and overlooking minor errors and omissions, we must judge it as a well-selected compendium of the facts of psychology. So far as our reading has gone, we have found the reports of the principal facts reliable; the author is not so trustworthy in reciting controversies or in expounding systematic views because he has not taken the trouble to go beneath the controversies or sympathetically to understand systematic differences. He has, as he planned, written a book of the order of Tigerstedt's *Physiologie*, but he has not approached (as he also desired) Ebbinghaus' *Psychologie*. For Ebbinghaus had a point of view which he tried to drive through the *Grundzüge*; and however inadequate he may at times have been, he always had an insight which penetrated to the psychological significance of his facts, and he was at all times critical, keenly discriminative, and constructive. Fröbes, on the other hand, is a reporter who has read widely and painstakingly, but from the outside; if he attempts criticism, he is likely to be superficial; if he is discriminative, it is seen only in his selection of facts for treatment and not in his treatment of the facts; and, lastly, he is never constructive; he throws no new light upon old facts, opens no novel perspective, makes no new generalization.

H. P. W.